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EXAMINER

KEENAN, JAMES W

ART UNIT

PAPER NUMBER

3652

DATE MAILED: 05/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/844,843

Applicant(s)

PRUTEANU ET AL.

Examiner

James Keenan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 February 2003 and 10 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 49-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 49-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 16 October 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/10/03 (originally filed 2/19/03) has been entered.

2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 10/16/02 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

As indicated by applicant, appropriate material corresponding to the drawing should be added to the specification.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 49-62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 49, lines 2-3, it is not clear to what the boom is “mounted” or in what manner it provides “increased lateral access range”;

and in lines 13-14, “reduce lateral and height clearance required” is vague.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 49, 58, and 60 are rejected under 35 U.S.C. 102(b) as being anticipated by Brandt (US 5,851,100), previously cited by applicant.

Brandt shows a container handling system mounted on a side loading refuse vehicle including extensible boom 24, mechanized arm arrangement 26 comprised of a single shaped arm member operated by a hydraulic cylinder, container grabber device 28, position sensing system 150 for sensing the boom extension, position sensing system 152 for sensing the arm rotation, actuators 66, 68, and 118-120 for extending/ retracting the boom, rotating the arm arrangement, and operating the grabber device, respectively, and a programmed microprocessor control system for operating the container handling system. The arm arrangement is at least to some extent considered to be “curved”, as broadly claimed (such as at the upper and lower ends thereof, shown in figure 5). Although there is no explicit disclosure that this shape is used “to reduce

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lateral and height clearance required”, since the claim fails to set forth this limitation in relation to anything, the reference is inherently considered to at least somewhat possess such capability.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 50-51, 55-56, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Sizemore et al (US 5,505,576), previously cited.

Brandt shows the arm actuator to be a hydraulic cylinder rather than a hydraulic rotary actuator.

Sizemore et al show a side loading refuse collection vehicle which utilizes rotary actuator 49 to rotate arm 18.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by substituting the arm hydraulic cylinder thereof with a rotary actuator, as Sizemore et al show that this would be an alternate equivalent expediency in the same environment.

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Re claim 51, the use of a pair of parallel spaced arms rather than a single solid arm is considered an obvious design choice. To connect such arms to opposite ends of a double-ended output shaft of the rotary actuator would have been a mere design expediency.

Re claims 55-56, the sensors of Brandt are potentiometers with rotating shafts. As best understood, such a structure is considered to be an "angular displacement transducer". On the other hand, the use of angular displacement transducers, if not inherent, is considered an obvious design expediency.

9. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Duell et al (US 6,123,497), previously cited.

Brandt does not disclose controlling the rotational speed of the arm based on the sensed arm position, although the ability to avoid slamming the container into the ground after the dump cycle is completed is disclosed, which ability is based on the sensed arm position.

Duell et al show an automated refuse vehicle wherein the rotational speed of the dumping arm 26 can be controlled according to several parameters, and at least to some extent is based on an arm position sensor  $AP_1$  (potentiometer).

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by controlling the rotational speed of the arm based on the arm position sensor, as suggested by Duell et al, as this would provide greater efficiency and flexibility when operating in the automatic dump cycle mode.

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10. Claims 53-54, 57, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Sizemore et al, as applied to claim 50 above, and further in view of Duell et al.

To have further modified the apparatus of Brandt and Sizemore et al by controlling the rotational speed of the arm based on the sensed position thereof, as shown by Duell et al, would have been obvious for the same reason set forth in the immediately preceding paragraph.

11. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Duell et al and Tordenmalm et al (US 4,896,582), previously cited.

As noted in paragraph 9 above, it would have been obvious to have modified Brandt in view of Duell et al. Duell et al disclose that the cylinder endpoints are "cushioned" so that the pistons are not banged into the cylinders at the end of travel. As best understood, this is a mechanical damping means. Thus, although the apparatus of Brandt as modified by Duell et al would have a damping means, it would not be part of the control system.

Tordenmalm et al show a control system for damping a piston as it approaches its end position in a hydraulic cylinder, including sensing means and a braking system operating in response thereto.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by utilizing a control means for damping the piston as it approached its end of travel in the cylinder, as suggested by the combined teachings of Duell et al

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and Tordenmalm et al, as this would simply be a well known expediency in the art for reducing shock and damage to the piston/cylinder assemblies.

12. Claims 49, 58, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of McNeilus et al (US 5,833,429), previously cited by applicant.

While Brandt alone is considered to anticipate these claims, as noted above, the following rejection is used to strengthen the examiner's position in the event it is determined that the arm is not curved and/or the claim is amended to more fully define such a curve.

McNeilus et al show a container handling system similar to that of Brandt (same assignee), including several embodiments of arm arrangements. Some (see esp. Figures 5 and 8) have a curved or bent arm structure.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by utilizing a curved arm structure as shown by McNeilus et al, if not inherent therein, as this is shown to be an alternate equivalent arm structure in the same environment. Again, such a structure is considered to at least extent reduce the clearance required for operation of the arm arrangement.

13. Claims 50-51, 55-56, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of McNeilus et al, as applied to claim 49 above, and further in view of Sizemore et al.



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This rejection utilizes the same obviousness rationale set forth in paragraph 8 above.

14. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of McNeilus et al, as applied to claim 49 above, and further in view of Duell et al.

This rejection utilizes the same obviousness rationale set forth in paragraph 9 above.

15. Claims 53-54, 57, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of McNeilus et al and Sizemore et al, as applied to claims 50-51 above, and further in view of Duell et al.

This rejection utilizes the same obviousness rationale set forth in paragraph 10 above.

16. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of McNeilus et al, as applied to claims 49 and 58 above, and further in view of Duell et al and Tordenmalm et al.

This rejection utilizes the same obviousness rationale set forth in paragraph 11 above.

17. Applicant's arguments filed 2/19/03 have been fully considered but they are not persuasive.

Applicant's arguments are limited to conclusory and generic statements that the prior art does not show certain claimed features of the invention. However, as indicated above, it is the examiner's opinion that the prior art, in particular Brandt alone or in combination with McNeilus

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et al, does show all claimed features, including the curved arm structure. No arguments have been set forth regarding the obviousness statements *per se*.

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is (703) 308-2559.

The fax phone number for the organization where this application or proceeding is assigned is 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1113.

jwk

May 21, 2003

  
JAMES W. KEENAN  
PRIMARY EXAMINER